



## **DEPARTMENT OF LABOR**

### **Mine Safety and Health Administration**

#### **Petitions for Modification of Application of Existing Mandatory Safety Standards**

**AGENCY:** Mine Safety and Health Administration, Labor.

**ACTION:** Notice.

**SUMMARY:** This notice is a summary of four petitions for modification submitted to the Mine Safety and Health Administration (MSHA) by the parties listed below.

**DATES:** All comments on the petitions must be received by MSHA's Office of Standards, Regulations, and Variances on or before [INSERT DATE 30 DAYS FROM DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

**ADDRESSES:** You may submit your comments, identified by "docket number" on the subject line, by any of the following methods:

1. Electronic Mail: [zzMSHA-comments@dol.gov](mailto:zzMSHA-comments@dol.gov). Include the docket number of the petition in the subject line of the message.

2. Facsimile: 202-693-9441.

3. Regular Mail or Hand Delivery: MSHA, Office of Standards, Regulations, and Variances, 201 12<sup>th</sup> Street South, Suite 4E401, Arlington, Virginia 22202-5452, Attention: Roslyn B. Fontaine, Deputy Director, Office of Standards, Regulations, and Variances. Persons delivering documents are required to check in at the receptionist's desk in Suite 4E401. Individuals may inspect copies of the petition and comments during normal business hours at the address listed above.

MSHA will consider only comments postmarked by the U.S. Postal Service or proof of delivery from another delivery service such as UPS or Federal Express on or before the deadline for comments.

**FOR FURTHER INFORMATION CONTACT:** Aromie Noe, Office of Standards, Regulations, and Variances at 202-693-9557 (voice), Noe.Song-Ae.A@dol.gov (email), or 202-693-9441 (facsimile). [These are not toll-free numbers.]

**SUPPLEMENTARY INFORMATION:** Section 101(c) of the Federal Mine Safety and Health Act of 1977 and Title 30 of the Code of Federal Regulations Part 44 govern the application, processing, and disposition of petitions for modification.

## **I. Background**

Section 101(c) of the Federal Mine Safety and Health Act of 1977 (Mine Act) allows the mine operator or representative of miners to file a petition to modify the application of any mandatory safety standard to a coal or other mine if the Secretary of Labor determines that:

1. An alternative method of achieving the result of such standard exists which will at all times guarantee no less than the same measure of protection afforded the miners of such mine by such standard; or
2. The application of such standard to such mine will result in a diminution of safety to the miners in such mine.

In addition, the regulations at 30 CFR 44.10 and 44.11 establish the requirements for filing petitions for modification.

## **II. Petitions for Modification**

Docket Number: M-2020-021-C.

Petitioner: Marion County Coal Resources, Inc., 151 Johnny Cake Rd., Metz, West Virginia 26585.

Mine: Marion County Mine, MSHA I.D. No. 46-01433, located in Marion County, West Virginia.

Regulation Affected: 30 CFR 75.1700 (Oil and gas wells).

Modification Request: The petitioner requests a modification of the existing standard, 30 CFR 75.1700, as it relates to vertical oil and gas wells at the mine. The operator is petitioning in order to plug and mine through wells in the Marcellus and Utica shales as well as other unconventional shale oil and gas wells.

The petitioner states that:

- (a) The Marion County Mine produces 25,000 tons of coal each day during production and approximately 9,000,000 cubic feet of methane is liberated at the mine each day.
- (b) The petitioner is petitioning to mine through wells in the Marcellus and Utica shale and other unconventional shales oil and gas wells within the mine's projected operations.
- (c) Two Marcellus wells are within the projected mine, which are known as 83263, Esther Clark 1H and 833083, Esther Clark 3H. It is expected that these two wells will have to be mined through.

The petitioner proposes the following alternative method:

(a) District Manager Approval:

(1) The petition applies to unconventional wells including the Marcellus and Utica shale and other unconventional shales oil and gas wells. These unconventional wells include wells that have been depleted of oil or gas production, wells that have not produced oil/gas and may have been plugged, or active wells not producing oil/gas. Potential oil and gas producing formations that have not produced in commercial quantities (e.g., exploratory wells, wildcat wells, and dry holes) are also included in this petition.

(2) A 300 foot safety barrier will be built and maintained around the oil and gas wells, until the MSHA District Manager has approved mining in that area. The petitioner defines oil and gas wells as active, inactive, abandoned, shut-in, previously plugged wells, water injection wells, and carbon dioxide sequestration wells.

(3) Before mining inside the safety barrier around any well that the mine will

intersect, the petitioner will give the MSHA District Manager a sworn affidavit or declaration by a company official, stating the required procedures for cleaning out, preparing, and plugging each gas or oil well have been completed.

(4) The affidavit or declaration will include the logs described below in (b)(viii), as well as any other records that the District Manager requires. If the well intersection is not planned, the petitioner will request a permit reducing the 300 foot barrier to remove the part not included in the well intersection.

(5) Where the total depth of the well is unknown, the petitioner must contact MSHA to create a communications protocol notifying the District Manager outside normal working hours.

(6) This petition applies to all underground coal mining at the mine.  
(b) The petitioner proposes to use the following procedures when cleaning out and preparing oil and gas wells prior to plugging and replugging;

(1) For cleaning out and preparing vertical oil and gas wells prior to plugging and replugging, the petitioner will test for gas emissions before cleaning out, preparing, plugging, and replugging oil and gas wells. If gas is detected, the MSHA District Manager will be contacted. The following procedures will be conducted:

(i) The petitioner will remove casings and clean the borehole to 200 feet below the coal seam being mined, or the lowest mineable seam (whichever is lower). For wells over 4,000 feet below the seam, the well will be cleaned to 400 feet below the seam, or the lowest mineable seam, whichever is lower.

(ii) If the well is less than 4,000 feet deep, the petitioner will clean out the well from the surface to at least 200 feet below the lowest mineable coal seam base, unless the MSHA District Manager requires cleaning below that based on the geological strata or well pressure data. The petitioner will provide to the District Manager all the information they have on the geology, strata, and pressure of the well. If the well depth is equal to or greater than

4,000 feet, the petitioner will clean out the well from the surface to at least 400 feet below the lowest mineable coal seam base. The petitioner will remove all materials that are within the well, throughout the entire diameter of the well, from wall to wall. If the depth is unknown, and there is no historical data, the District Manager will be contacted before continuing. In active, non-producing wells being prepared according to this petition, the petitioner will (1) attempt to remove all casings using diligent effort; or (2) if the casings cannot be removed, fill with cement from the lowest possible depth to 200 feet below the seam being mined or to the lowest mineable seam, whichever is lower for wells less than 4,000 feet, or 400 feet below the seam mine, whichever is lower, for wells 4,000 feet or more, (3) casings unable to be removed will be perforated 200 feet below the seam to be mined, or lowest minable seam whichever is lower, or 400 feet below the seam to be mined if wells are 4,000 feet or deeper, and the well ring (annuli) will be cemented or filled.

(iii) Casings unable to be removed will be cut, milled, perforated or ripped at a spacing to help remove remaining casing in the seam by mining equipment. Remaining casing will be perforated or ripped to permit the injection of cement into voids within and around the casing. Any remaining casing will be perforated or ripped every 5 feet from 10 feet below the seam to 10 feet above the seam.

(iv) The petitioner will pull at least 150 percent casing string weight or make at least 3 attempts to spear or overshot to grip the casing for the pull effort. A 3,000 foot casing string will be assumed when the casing string length is unknown. Records of these efforts, including additional measures required by the District Manager, and casing length and weight, will be kept for MSHA to review. The petitioner will perforate or rip at every 50 feet from at least 200 feet (400 feet if the total well depth is 4,000 feet or deeper) below the base of the coal seam to be mined or the lowest mineable coal seam, whichever is lower, up to 100 feet above the uppermost mineable coal seam that is being mined. The petitioner will ensure that the annulus

between the casings and the well walls are filled with expanding cement, with a minimum of 0.5 percent after setting, and contain no voids.

(v) Jet/sand cutting will be used for ripping or perforating casing with three or more strings of casing in the seam. This uses compressed nitrogen gas and sand to cut well casings. Active wells start 200 feet above the bottom of the coal seam at 200 foot intervals, to 200 feet below the bottom of the seam.

(vi) If unable to remove all casings, the petitioner will contact the District Manager. If unable to clean out casings, the petitioner will prepare the well from the surface to a minimum of 200 feet below the base of the lowest mineable seam for wells less than 4,000 feet deep, and 400 feet below the lowest mineable seam for wells 4,000 feet or deeper (unless the MSHA District Manager requires a greater distance).

(vii) If the petitioner, with a casing bond log, can show to the satisfaction of the District Manager that the annuli in the well are properly sealed with cement, then the petitioner will not perforate or rip casings at that well. Any casings remaining when multiple casing and tubing strings exist in coal horizon(s) will be ripped or perforated and filled with cement. A casing bond log for each casing and tubing string will be required if used instead of perforating multiple strings.

(viii) Down-hole logs will be prepared for each well consisting of caliper survey logs, a bond log if available, a deviation survey, and a gamma survey suitable for determining the top, bottom, and thickness of all coal seams and potential hydrocarbon producing strata and the location for the bridge plug.

(ix) A journal will be kept to describe the depth and nature of materials encountered; the bit size and type used to drill each portion of the hole; the length and type of material for plugging the well; the length of casing removed, perforated or ripped or left in place; any sections where casing was cut or milled; or any other information for cleaning and sealing

the well. Invoices, work-orders, and other related records will be maintained and available to MSHA at request.

(x) If all casing can be removed (or there is no casing), the operator will prepare the well for plugging, and use seals described below. For wells less than 4,000 feet deep to seal to 200 feet below the coal seam to be mined, or the lowest mineable seam (whichever is lower), or for wells that are 4,000 feet or deeper, seal to 400 feet below the coal seam to be mined, or the lowest mineable seam, whichever is lower. In the event that the cleaned-out well produces excessive gas, a mechanical bridge plug will be placed in the borehole in a competent stratum at least 200 feet (at least 400 feet if the well is 4,000 feet or deeper) below the base of the lowest mineable coalbed, but above the top of the uppermost hydrocarbon-producing stratum, unless the MSHA District Manager requires a larger distance. The petitioner will give the District Manager any geological information possessed on strata and pressure of the well. If it is not possible to set a mechanical bridge plug, an appropriately sized packer may be used in place of the mechanical bridge plug.

(xi) If the uppermost hydrocarbon-producing stratum is within 300 feet of the base of the lowest mineable coalbed, a properly placed mechanical bridge plug, described in paragraph (vii) above, will be used to isolate the hydrocarbon-producing stratum from the expanding cement plug. A minimum of 200 feet (400 feet if the well is 4,000 feet or deeper) of expanding cement will be placed below the lowest mineable coalbed unless the MSHA District Manager requires a greater distance, based on judgement, geological strata, or well pressure.

(c) For plugging or replugging oil and gas wells to the surface:

(1) Once the well has been completely cleaned out, as specified above, the following will be done to plug or replug wells:

(i) A cement plug will be set by pumping an expanding cement slurry down the well from at least 200 feet (400 feet if the well is 4,000 feet or deeper) below the base of the coal seam, or lowest mineable seam, depending on which is lower, or lower if determined

by the District Manager. It will be pumped under 200 pounds per square inch of pressure, using Portland cement or another lightweight cement mixture to fill from 100 feet above the top of the uppermost mineable coal seam (or higher, if determined by the District Manager) to the surface.

(ii) Steel turnings or small magnetic particles will be embedded in the top of the cement near the surface as a permanent magnetic monument of the well, or alternatively, a 40 inch or larger casing set in cement will be set extended 36 inches above ground level with the API well number engraved or welded on the casing (if not marked physically, high-resolution GPS coordinates will be provided).

(d) Procedures for plugging or replugging oil and gas wells to use as degasification wells:

(1) Once the well has been completely cleaned out, as specified above, the following will be done to plug or replug wells to be used as degasification wells:

(i) A cement plug will be set by pumping an expanding cement slurry down the well from at least 200 feet (400 feet if the well is 4,000 feet or deeper) below the coal seam to be mined, or lowest mineable seam, depending on which is lower, or lower if determined by the District Manager. It will be pumped under 200 pounds per square inch of pressure. The top of the cement will extend at least 50 feet above the top of the seam unless more is required by the District Manager.

(ii) The bedrock of the upper portion of the well will be grouted with a casing to protect it. The rest of the well can be cased or uncased.

(iii) The top of the degasification casing will be fitted with wellhead equipment, as required by the District Manager in the approved ventilation plan, this equipment can include check valves, shut-in valves, sampling ports, flame arrestor equipment, and security fencing.

(iv) Degasification operations will be included in the approved ventilation plan, including methane level tests and limits on methane concentrations.

(v) Once the mine area is degassed by a well and sealed, or the mine is



abandoned, the petitioner will plug degasification wells: (1) a tube will be inserted to the bottom of the well (or if not possible, within 100 feet above the seam), blockage will be removed to make sure the tube can be inserted to the required depth; (2) a cement plug will be set into the well using Portland cement or another lightweight cement down the tubing until the well is filled to the surface; (3) steel turnings or small magnetic particles will be embedded in the top of the cement near the surface as a permanent magnetic monument of the well, or alternatively, a 4.0 inch or larger casing set in cement will be set extended 36 inches above ground level with the API well number engraved or welded on the casing; and (4) this does not apply to degasification holes not intersecting the mined seam, do not commercially produce gas, and have no API number.

(e) Alternative procedures for preparing or replugging oil and gas wells.

(1) If it is agreed upon by the District Manager, that a well cannot be cleaned out completely due to damage to the well because of subsidence, caving, or another factor:

(i) A hole will be drilled adjacent and parallel to the well to a depth of at least 200 feet (400 feet if the well is 4,000 feet or deeper) below the lowest mineable coal seam, unless more is required by the District Manager.

(ii) A geophysical sensing device will be used to locate casings remaining in the well.

(iii) If there are casing(s) present in the well, the petitioner will access the well from a parallel hole and will perforate or rip all casings at intervals of at least 5 feet, from 10 feet below the coal seam to 10 feet above the coal seam. After that, the petitioner will perforate or rip at least every 50 feet from 200 feet (400 feet if the well is 4,000 feet or deeper) below the coal seam to be mined, or below base of the lowest mineable coal seam, whichever is lower, or up to 100 feet above the seam mined, unless more is required by the District Manager.

(iv) The annulus between casings and the well wall will be filled with

expanding cement (at a minimum 0.5 percent expansion upon setting), with no voids. If the petitioner, using a casing bond, can demonstrate that the annulus of the well is adequately sealed with cement, the petitioner will not perforate or rip casing for that well. When there are multiple casings and tubing strings in the coal horizon, remaining casing will be ripped or perforated and filled with expanding cement. A casing bond log for each casing and tubing string will be used instead of ripping or perforating multiple strings.

(v) If the petitioner and MSHA determine that there is not enough casing in the well, a horizontal hydraulic fracturing technique can be used to intercept the original well. The petitioner will fracture at least six places at intervals agreed to by the District Manager. These fractures will be from at least 200 feet (400 feet if the well is 4,000 feet or deeper) below the base of the coal seam to be mined, or lowest mineable coal seam, whichever is lowest, or to at least 50 feet above the seam mined. Expanding cement will be pumped into the fractured well to intercept voids.

(vi) Down-hole logs will be prepared for each well consisting of caliper survey logs, a bond log if available, a deviation survey, and a gamma survey suitable for determining the top, bottom, and thickness of all coal seams and potential hydrocarbon producing strata and the location for the bridge plug.

(vii) A journal will be kept describing the depth and nature of materials encountered; the bit size and type used to drill each portion of the hole; the length and type of material for plugging the well; the length of casing removed, perforated or ripped or left in place, any sections where casing was cut or milled; or any other information for cleaning and sealing the well. Invoices, work-orders, and other related records will be maintained and available to MSHA at request.

(viii) After plugging the wells as described above, the petitioner will plug the adjacent hole, from the bottom to the surface, using Portland cement or another lightweight cement.

(ix) Steel turnings or small magnetic particles will be embedded in the top of the cement near the surface as a permanent magnetic monument of the well, or alternatively, a 4.0 inch or larger casing set in cement will be set extended 36 inches above ground level

(x) The petitioner and District Manager will discuss each hole, a combination of methods outlined in (d)(1)(iii) and (d)(1)(iv) will be used on a single well, depending on conditions. The petitioner will use a registered petroleum engineer to provide additional documents and certificates to support alternative methods if requested by the District Manager.

(f) The petitioner will use the following procedures for mining within a 100-foot diameter barrier around a well:

(i) Before intersecting any plugged or replugged wells, a conference before intersecting any plugged or replugged well may be requested by any of the following: the petitioner (or its representative), a representative of miners, a State agency, or the MSHA District Manager. The requester will let the other parties know of the conference with a reasonable amount of time before the conference, allowing for an opportunity to participate. The focus of the conference is to review, evaluate, and accommodate any abnormal or unusual circumstances that relate to the condition of the well or surrounding strata.

(ii) The intersection of a well by the petitioner will be conducted on a shift approved by the MSHA District Manager. The petitioner will notify the MSHA District Manager and the miners' representative prior to the intersection so that representatives can be present.

(iii) For continuous mining, drilage sites will be installed by the petitioner, at the last open crosscut near the area to be mined to ensure intersection of the well. The drilage sites will not be more than 50 feet from the well. For longwall-mining, distance markers will be installed on 5-foot centers 50 feet ahead of the well in the headgate and tailgate entry.

(iv) Firefighting equipment, including fire extinguishers, rock dust, and

sufficient fire hose to reach the working face area of the mining-through will be available when either the conventional or continuous mining method is used. The fire hose will be located in the last open crosscut of the entry or room. The petitioner will maintain the water line to be able to reach the farthest point of penetration on the section. A hose to the longwall water supply is sufficient if longwall mining.

(v) Sufficient supplies of roof support and ventilation materials will be available and located at the last open crosscut. In addition, an emergency plug and/or plugs will be available in the immediate area of the mine-through.

(vi) Equipment will be checked for permissibility and serviced on the shift prior to mining-through the well. Water sprays, water pressures and water flow rates will be checked and any issues will be corrected.

(vii) The methane monitor on the longwall, continuous mining machine, or cutting machine and loading machine will be calibrated on the shift prior to mining-through the well.

(viii) When mining is in progress, tests for methane will be made with a hand-held methane detector at least every 10 minutes from the time that mining with the continuous mining machine or longwall face is within 30 feet of the well until the well is intersected and immediately prior to well intersection. During the actual intersection process, no individual will be allowed on the return side until mining-through has been completed and the area has been examined and declared safe. Workplace examinations on the return side of the shearer will be done while the machine is idle. The approved ventilation plan will be followed at all times unless otherwise determined by the District Manager due to a need for more air velocity for intersection.

(ix) When using continuous or conventional mining methods, the working place will be free from accumulations of coal dust and coal spillages, and rock dust will be placed on the roof, rib and floor within 20 feet of the face when intersecting near the well on the

shift or shifts during which it will occur. For longwall sections, rock dusting will be done on roof, rib, and floor up to the headgate and tailgate gob.

(x) When the wellbore is intersected, all equipment will be de-energized and the area thoroughly examined and determined safe before mining is resumed.

(xi) After a well has been intersected and the working place determined safe, mining will continue inby the well at a sufficient distance to permit adequate ventilation around the area of the wellbore.

(xii) When a torch is necessary for poorly cut or milled casings, no open flames will be permitted in the area until adequate ventilation has been established around the wellbore and methane levels of less than 1 percent are present in all areas affected by flames or sparks from the torch. Before using a torch, a thick layer of rock dust will be applied to any roof, face, floor, ribs or exposed coal within 20 feet of the casing.

(xiii) Non-sparking (brass) tools will be used only to expose and examine cased wells. These tools will be located on the working section.

(xiv) No person will be permitted in the area of the mining-through operation except for those actually engaged in the operation, company personnel, representatives of the miners, personnel from MSHA, and personnel from the appropriate State agency.

(xv) The petitioner will alert all personnel in the mine of a planned intersection of the well before going underground if it is to occur during the shift. The warning will be continuously repeated until the well is mined through.

(xvi) The mining-through operation will be under the direct supervision of a certified official. Instructions concerning the mining-through operation will be issued only by the certified official in charge.

(xvii) If the petitioner cannot find the well in the longwall panel or if the intersection is missed, the petitioner will cease mining and examine the area for hazardous conditions at the projected well location, notify the District Manager, and make a reasonable

attempt to locate the well using visual observation and inspection of the survey data. Mining may resume if the well is located and hazardous conditions do not exist. The petitioner will work with the District Manager to resolve issues before mining is resumed.

(xviii) If the well is not plugged to the total depth of the minable coal seams identified with the core hole logs, coal seams below the lowest plug will remain subject to 30 CFR 75.1700 barrier requirements if developed in the future.

(xix) The petitioner will follow all safety precautions required by MSHA and State regulatory agencies having jurisdiction over the plugging site to provide protection to miners.

(xx) Miners involved in plugging/replugging will be trained on the operations of this petition before starting the process. The petition will be posted at well sites until plugging/replugging is complete.

(xxi) When using mechanical bridge plugs, the petitioner should use the best technology required or recognized by the State or oil/gas industries.

(xxii) The petitioner will notify the District Manager as set forth in the cut through procedures for each well.

(xxiii) Within 30 days after the Proposed Decision and Order (PDO) becomes final, the petitioner will submit proposed revisions to be approved by the MSHA District Manager, as part of the 30 CFR 48 training plan. This will include initial and refresher training. The revisions are to include training on the above terms for all miners involved in well intersection prior to mining within 150 feet of the well which is to be mined through.

(xxiv) The required person under 30 CFR 75.1501 Emergency Evacuations is responsible for emergencies relating to the intersection and this person will review intersection procedures before the intersection occurs.

(xxv) Within 30 days of when this PDO is finalized, the petitioner will

submit a revised emergency evacuation and firefighting training program, required by 30 CFR 75.1502. The petitioner will revise the program to incorporate hazards and evacuation plans used for well intersection. All underground miners will be trained in the above plan revisions within 30 days of submittal.

(xxvi) The petitioner asserts that the proposed alternative method will at all times guarantee no less than the same measure of protection from the potential hazards against which the existing standard for 30 CFR 75.1700 is intended to guard.

-----

Docket Number: M-2020-026-C.

Petitioner: Harrison County Coal Resources, Inc., 46116 National Rd., Saint Clairsville, OH 43950.

Mine: Harrison County Mine, MSHA I.D. No. 46-01318, located in Harrison County, West Virginia.

Regulation Affected: 30 CFR 75.1700 (Oil and gas wells).

Modification Request: The petitioner requests a modification of the existing standard, 30 CFR 75.1700, as it relates to vertical oil and gas wells at the Harrison County Mine. The operator is petitioning in order to plug and mine through wells in the Marcellus and Utica shales as well as other unconventional shale oil and gas wells.

The petitioner states that:

(a) The Harrison County Mine produces approximately 27,000 tons of coal each day and 1,922,000 cubic feet of methane is liberated at the mine each day.

(b) There are unconventional wells within the projected mining operations, which includes a group of 5 wells and another group of 8 wells, which will have to be mined through. The petitioner does not own gas rights where the mine is located; more drilled wells may need to be addressed.

- (c) The petitioner is applying to mine through the wells in Marcellus and Utica shales, and other unconventional shale oil and gas wells within the mine's projected operations.

The petitioner proposes the following alternative method:

(a) District Manager Approval:

(1) The petition applies to unconventional wells including the Marcellus and Utica shales and other unconventional shale oil and gas wells. These unconventional wells include wells that have been depleted of oil or gas production, wells that have not produced oil/gas and may have been plugged, or active wells not producing oil/gas. Potential oil and gas producing formations that have not produced in commercial quantities (e.g., exploratory wells, wildcat wells, and dry holes), are also included in this petition.

(2) A 300 foot safety barrier will be built and maintained around the oil and gas wells, until the MSHA District Manager has approved mining in that area. The petitioner defines oil and gas wells as active, inactive, abandoned, shut-in, previously plugged wells, water injection wells, and carbon dioxide sequestration wells.

(3) Before mining inside the safety barrier around any well that the mine will intersect, the petitioner will give the MSHA District Manager a sworn affidavit or declaration by a company official, stating the required procedures for cleaning out, preparing, and plugging each gas or oil well have been completed.

(4) The affidavit or declaration will include the logs described below in (b)(viii), as well as any other records that the District Manager requires. If the well intersection is not planned, the petitioner will request a permit reducing the 300 foot barrier to remove the part not included in the well intersection.

(5) Where the total depth of the well is unknown, the petitioner must contact MSHA to create a communications protocol notifying the District Manager outside normal working hours.

(6) This petition applies to all underground coal mining at the mine.



(b) The petitioner proposes to use the following procedures when cleaning out and preparing oil and gas wells prior to plugging and replugging;

(1) For cleaning out and preparing vertical oil and gas wells prior to plugging and replugging, the petitioner will test for gas emissions before cleaning out, preparing, plugging, and replugging oil and gas wells. If gas is detected, the MSHA District Manager will be contacted. The following procedures will be conducted:

(i) The petitioner will remove casings and clean the borehole to 200 feet below the coal seam being mined, or the lowest mineable seam (whichever is lower). For wells over 4,000 feet below the seam, the well will be cleaned to 400 feet below the seam, or the lowest mineable seam, whichever is lower.

(ii) If the well is less than 4,000 feet deep, the petitioner will clean out the well from the surface to at least 200 feet below the lowest mineable coal seam base, unless the MSHA District Manager requires cleaning below that based on the geological strata or well pressure data. The petitioner will provide to the District Manager all the information they have on the geology, strata, and pressure of the well. If the well depth is equal to or greater than 4,000 feet, the petitioner will clean out the well from the surface to at least 400 feet below the lowest mineable coal seam base. The petitioner will remove all materials that are within the well, throughout the entire diameter of the well, from wall to wall. If the depth is unknown, and there is no historical data, the District Manager will be contacted before continuing. In active, non-producing wells being prepared according to this petition, the petitioner will (1) attempt to remove all casings using diligent effort; or (2) if the casings cannot be removed, fill with cement from the lowest possible depth to 200 feet below the seam being mined or to the lowest mineable seam, whichever is lower for wells less than 4,000 feet, or 400 feet below the seam mine, whichever is lower, for wells 4,000 feet or more, (3) casings unable to be removed will be perforated 200 feet below the seam to be mined, or lowest minable seam whichever is lower, or

400 feet below the seam to be mined if wells are 4,000 feet or deeper, and the well ring (annuli) will be cemented or filled.

(iii) Casings unable to be removed will be cut, milled, perforated or ripped at a spacing to help remove remaining casing in the seam by mining equipment. Remaining casing will be perforated or ripped to permit the injection of cement into voids within and around the casing. Any remaining casing will be perforated or ripped every 5 feet from 10 feet below the seam to 10 feet above the seam.

(iv) The petitioner will pull at least 150 percent casing string weight or make at least 3 attempts to spear or overshot to grip the casing for the pull effort. A 3,000 foot casing string will be assumed when the casing string length is unknown. Records of these efforts, including additional measures required by the District Manager, and casing length and weight, will be kept for MSHA to review.

(v) The petitioner will perforate or rip at every 50 feet from at least 200 feet (400 feet if the total well depth is 4,000 feet or deeper) below the base of the coal seam to be mined or the lowest mineable coal seam, whichever is lower, up to 100 feet above the uppermost mineable coal seam that is being mined. The petitioner will ensure that the annulus between the casings and the well walls are filled with expanding cement, with a minimum of 0.5 percent after setting, and contain no voids.

(vi) Jet/sand cutting will be used for ripping or perforating casing with three or more strings of casing in the seam. This uses compressed nitrogen gas and sand to cut well casings. Active wells start 200 feet above the bottom of the coal seam at 200 foot intervals, to 200 feet below the bottom of the seam.

(vii) If unable to remove all casings, the petitioner will contact the District Manager. If unable to clean out casings, the petitioner will prepare the well from the surface to a minimum of 200 feet below the base of the lowest mineable seam for wells less than 4,000 feet

deep, and 400 feet below the lowest mineable seam for wells 4,000 feet or deeper (unless the MSHA District Manager requires a greater distance).

(viii) If the petitioner, with a casing bond log, can show to the satisfaction of the District Manager that the annuli in the well are properly sealed with cement, then the petitioner will not perforate or rip casings at that well. Any casings remaining when multiple casing and tubing strings exist in coal horizon(s) will be ripped or perforated and filled with cement. A casing bond log for each casing and tubing string will be required if used instead of perforating multiple strings.

(ix) Down-hole logs will be prepared for each well consisting of caliper survey logs, a bond log if available, a deviation survey, and a gamma survey suitable for determining the top, bottom, and thickness of all coal seams and potential hydrocarbon producing strata and the location for the bridge plug.

(x) A journal will be kept to describe the depth and nature of materials encountered; the bit size and type used to drill each portion of the hole; the length and type of material for plugging the well; the length of casing removed, perforated or ripped or left in place; any sections where casing was cut or milled; or any other information for cleaning and sealing the well. Invoices, work-orders, and other related records will be maintained and available to MSHA at request.

(xi) If all casing can be removed (or there is no casing), the operator will prepare the well for plugging, and use seals described below. For wells less than 4,000 feet deep to seal to 200 feet below the coal seam to be mined, or the lowest mineable seam (whichever is lower), or for wells that are 4,000 feet or deeper, seal to 400 feet below the coal seam to be mined, or the lowest mineable seam, whichever is lower.

(xii) In the event that the cleaned-out well produces excessive gas, a mechanical bridge plug will be placed in the borehole in a competent stratum at least 200 feet (at least 400 feet if the well is 4,000 feet or deeper) below the base of the lowest mineable coalbed,

but above the top of the uppermost hydrocarbon-producing stratum, unless the MSHA District Manager requires a larger distance. The petitioner will give the District Manager any geological information possessed on strata and pressure of the well. If it is not possible to set a mechanical bridge plug, an appropriately sized packer may be used in place of the mechanical bridge plug.

(xiii) If the uppermost hydrocarbon-producing stratum is within 300 feet of the base of the lowest mineable coalbed, a properly placed mechanical bridge plug, described in paragraph (vii) above, will be used to isolate the hydrocarbon-producing stratum from the expanding cement plug. A minimum of 200 feet (400 feet if the well is 4,000 feet or deeper) of expanding cement will be placed below the lowest mineable coalbed unless the MSHA District Manager requires a greater distance, based on judgement, geological strata, or well pressure.

(c) For plugging or replugging oil and gas wells to the surface:

(1) Once the well has been completely cleaned out, as specified above, the following will be done to plug or replug wells:

(i) A cement plug will be set by pumping an expanding cement slurry down the well from at least 200 feet (400 feet if the well is 4,000 feet or deeper) below the base of the coal seam, or lowest mineable seam, depending on which is lower, or lower if determined by the District Manager. It will be pumped under 200 pounds per square inch of pressure, using Portland cement or another lightweight cement mixture to fill from 100 feet above the top of the uppermost mineable coal seam (or higher, if determined by the District Manager) to the surface.

(ii) Steel turnings or small magnetic particles will be embedded in the top of the cement near the surface as a permanent magnetic monument of the well, or alternatively, a 4.0 inch or larger casing set in cement will be set extended 36 inches above ground level with the API well number engraved or welded on the casing (if not marked physically, high-resolution GPS coordinates will be provided).

(d) Procedures for plugging or replugging oil and gas wells to use as degasification wells:

(1) Once the well has been completely cleaned out, as specified above, the following will be done to plug or replug wells to be used as degasification wells:

(i) A cement plug will be set by pumping an expanding cement slurry down the well from at least 200 feet (400 feet if the well is 4,000 feet or deeper) below the coal seam to be mined, or lowest mineable seam, depending on which is lower, or lower if determined by the District Manager. It will be pumped under 200 pounds per square inch of pressure. The top of the cement will extend at least 50 feet above the top of the seam unless more is required by the District Manager.

(ii) The bedrock of the upper portion of the well will be grouted with a casing to protect it. The rest of the well can be cased or uncased.

(iii) The top of the degasification casing will be fitted with wellhead equipment, as required by the District Manager in the approved ventilation plan, this equipment can include check valves, shut-in valves, sampling ports, flame arrestor equipment, and security fencing.

(iv) Degasification operations will be included in the approved ventilation plan, including methane level tests and limits on methane concentrations.

(v) Once the mine area is degassed by a well and sealed, or the mine is abandoned, the petitioner will plug degasification wells: (1) a tube will be inserted to the bottom of the well (or if not possible, within 100 feet above the seam), blockage will be removed to make sure the tube can be inserted to the required depth; (2) a cement plug will be set into the well using Portland cement or another lightweight cement down the tubing until the well is filled to the surface; (3) steel turnings or small magnetic particles will be embedded in the top of the cement near the surface as a permanent magnetic monument of the well, or alternatively, a 4.0 inch or larger casing set in cement will be set extended 36 inches above ground level with the API well number engraved or welded on the casing; and (4) this does not apply to degasification

holes not intersecting the mined seam, do not commercially produce gas, and have no API number.

(e) Alternative procedures for preparing or replugging oil and gas wells.

(1) If it is agreed upon by the District Manager, that a well cannot be cleaned out completely due to damage to the well because of subsidence, caving, or another factor:

(i) A hole will be drilled adjacent and parallel to the well to a depth of at least 200 feet (400 feet if the well is 4,000 feet or deeper) below the lowest mineable coal seam, unless more is required by the District Manager.

(ii) A geophysical sensing device will be used to locate casings remaining in the well.

(iii) If there are casing(s) present in the well, the petitioner will access the well from a parallel hole and will perforate or rip all casings at intervals of at least 5 feet, from 10 feet below the coal seam to 10 feet above the coal seam. After that, the petitioner will perforate or rip at least every 50 feet from 200 feet (400 feet if the well is 4,000 feet or deeper) below the coal seam to be mined, or below the base of the lowest mineable coal seam, whichever is lower, or up to 100 feet above the seam mined, unless more is required by the District Manager.

(iv) The annulus between casings and the well wall will be filled with expanding cement (at a minimum 0.5 percent expansion upon setting), with no voids. If the petitioner, using a casing bond, can demonstrate that the annulus of the well is adequately sealed with cement, the petitioner will not perforate or rip casing for that well. When there are multiple casings and tubing strings in the coal horizon, remaining casing will be ripped or perforated and filled with expanding cement. A casing bond log for each casing and tubing string will be used instead of ripping or perforating multiple strings.

(v) If the petitioner and MSHA determine that there is not enough casing

in the well, a horizontal hydraulic fracturing technique can be used to intercept the original well. The petitioner will fracture at least six places at intervals agreed to by the District Manager. These fractures will be from at least 200 feet (400 feet if the well is 4,000 feet or deeper) below the base of the coal seam to be mined, or the lowest mineable coal seam, whichever is lowest, or to at least 50 feet above the seam mined. Expanding cement will be pumped into the fractured well to intercept voids.

(vi) Down-hole logs will be prepared for each well consisting of caliper survey logs, a bond log if available, a deviation survey, and a gamma survey suitable for determining the top, bottom, and thickness of all coal seams and potential hydrocarbon producing strata and the location for the bridge plug.

(vii) A journal will be kept describing the depth and nature of materials encountered; the bit size and type used to drill each portion of the hole; the length and type of material for plugging the well; the length of casing removed, perforated or ripped or left in place, any sections where casing was cut or milled; or any other information for cleaning and sealing the well. Invoices, work-orders, and other related records will be maintained and available to MSHA at request.

(viii) After plugging the wells as described above, the petitioner will plug the adjacent hole, from the bottom to the surface, using Portland cement or another lightweight cement.

(ix) Steel turnings or small magnetic particles will be embedded in the top of the cement near the surface as a permanent magnetic monument of the well, or alternatively, a 4.0 inch or larger casing set in cement will be set extended 36 inches above ground level

(x) The petitioner and District Manager will discuss each hole, a combination of methods outlined in (d)(1)(iii) and (d)(1)(iv) will be used on a single well, depending on conditions. The petitioner will use a registered petroleum engineer to provide

additional documents and certificates to support alternative methods if requested by the District Manager.

(2) The petitioner will use the following procedures for mining within a 100-foot diameter barrier around a well:

(i) Before intersecting any plugged or replugged wells, a conference before intersecting any plugged or replugged well may be requested by any of the following: the petitioner (or its representative), a representative of miners, a State agency, or the MSHA District Manager. The requester will let the other parties know of the conference with a reasonable amount of time before the conference, allowing for an opportunity to participate. The focus of the conference is to review, evaluate, and accommodate any abnormal or unusual circumstances that relate to the condition of the well or surrounding strata.

(ii) The intersection of a well by the petitioner will be conducted on a shift approved by the MSHA District Manager. The petitioner will notify the MSHA District Manager and the miners' representative prior to the intersection so that representatives can be present.

(iii) For continuous mining, drivage sites will be installed by the petitioner at the last open crosscut near the area to be mined to ensure intersection of the well. The drivage sites will not be more than 50 feet from the well. For longwall-mining, distance markers will be installed on 5-foot centers 50 feet ahead of the well in the headgate and tailgate entry.

(iv) Firefighting equipment, including fire extinguishers, rock dust, and sufficient fire hose to reach the working face area of the mining-through will be available when either the conventional or continuous mining method is used. The fire hose will be located in the last open crosscut of the entry or room. The petitioner will maintain the water line to be able to reach the farthest point of penetration on the section. A hose to the longwall water supply is sufficient if longwall mining.

(v) Sufficient supplies of roof support and ventilation materials will be



available and located at the last open crosscut. In addition, an emergency plug and/or plugs will be available in the immediate area of the mine-through.

(vi) Equipment will be checked for permissibility and serviced on the shift prior to mining-through the well. Water sprays, water pressures and water flow rates will be checked and any issues will be corrected.

(vii) The methane monitor on the longwall, continuous mining machine, or cutting machine and loading machine will be calibrated on the shift prior to mining-through the well.

(viii) When mining is in progress, tests for methane will be made with a hand-held methane detector at least every 10 minutes from the time that mining with the continuous mining machine or longwall face is within 30 feet of the well until the well is intersected and immediately prior to well intersection. During the actual cutting through process, no individual will be allowed on the return side until mining-through has been completed and the area has been examined and declared safe. Workplace examinations on the return side of the shearer will be done while the machine is idle. The approved ventilation plan will be followed at all times unless otherwise determine by the District Manager due to a need for more air velocity for intersection.

(ix) When using continuous or conventional mining methods, the working place will be free from accumulations of coal dust and coal spillages, and rock dust will be placed on the roof, rib and floor within 20 feet of the face when intersecting near the well on the shift or shifts during which it will occur. For longwall sections, rock dusting will be done on roof, rib, and floor up to the headgate and tailgate gob.

(x) When the wellbore is intersected, all equipment will be de-energized and the area thoroughly examined and determined safe before mining is resumed.

(xi) After a well has been intersected and the working place determined

safe, mining will continue in by the well at a sufficient distance to permit adequate ventilation around the area of the wellbore.

(xii) When a torch is necessary for poorly cut or milled casings, no open flames will be permitted in the area until adequate ventilation has been established around the wellbore and methane levels of less than 1 percent are present in all areas affected by flames or sparks from the torch. Before using a torch, a thick layer of rock dust will be applied to any roof, face, floor, ribs or exposed coal within 20 feet of the casing.

(xiii) Non-sparking (brass) tools will be used only to expose and examine cased wells. These tools will be located on the working section.

(xiv) No person will be permitted in the area of the mining-through operation except for those actually engaged in the operation, company personnel, representatives of the miners, personnel from MSHA, and personnel from the appropriate State agency.

(xv) The petitioner will alert all personnel in the mine of a planned intersection of the well before going underground if it is to occur during the shift. The warning will be continuously repeated until the well is mined through.

(xvi) The mining-through operation will be under the direct supervision of a certified official. Instructions concerning the mining-through operation will be issued only by the certified official in charge.

(xvii) If the petitioner cannot find the well in the longwall panel or if the intersection is missed, the petitioner will cease mining and examine the area for hazardous conditions at the projected well location, notify the District Manager, and make a reasonable attempt to locate the well using visual observation and inspection of the survey data. Mining may resume if the well is located and hazardous conditions do not exist. The petitioner will work with the District Manager to resolve issues before mining is resumed.

(xviii) If the well is not plugged to the total depth of the minable coal seams

identified with the core hole logs, coal seams below the lowest plug will remain subject to 30 CFR 75.1700 barrier requirements if developed in the future.

(xix) The petitioner will follow all safety precautions required by MSHA and State regulatory agencies having jurisdiction over the plugging site to provide protection to miners.

(xx) Miners involved in plugging/replugging will be trained on the operations of this petition before starting the process. The petition will be posed at well sites until plugging/replugging is complete.

(xxi) When using mechanical bridge plugs, the petitioner should use the best technology required or recognized by the State or oil/gas industries.

(xxii) The petitioner will notify the District Manager as set forth in the cut through procedures for each well.

(xxiii) Within 30 days after the Proposed Decision and Order (PDO) becomes final, the petitioner will submit proposed revisions to be approved by the MSHA District Manager, as part of the 30 CFR 48 training plan. This will include initial and refresher training. The revisions are to include training on the above terms for all miners involved in well intersection prior to mining within 150 feet of the well which is to be mined through.

(xxiv) The required person under 30 CFR 75.1501 Emergency Evacuations is responsible for emergencies relating to the intersection and this person will review intersection procedures before the intersection occurs.

(xxv) Within 30 days of when this PDO is finalized, the petitioner will submit a revised emergency evacuation and firefighting training program, required by 30 CFR 75.1502. The petitioner will revise the program to incorporate hazards and evacuation plans used for well intersection. All underground miners will be trained in the above plan revisions within 30 days of submittal.

(xxvi) The petitioner asserts that the proposed alternative method will at all

times guarantee no less than the same measure of protection from the potential hazards against which the existing standard for 30 CFR 75.1700 is intended to guard.

-----

Docket Number: M-2020-027-C.

Petitioner: Ohio County Coal Resources, Inc., 46226 National Rd., Saint Clairsville, OH 43950.

Mine: Ohio County Mine, MSHA I.D. No. 46-01436, located in Marion County, West Virginia.

Regulation Affected: 30 CFR 75.1700 (Oil and gas wells).

Modification Request: The petitioner requests a modification of the existing standard, 30 CFR 75.1700, as it relates to vertical oil and gas wells at the Ohio County Mine. The operator is petitioning in order to plug and mine through wells in the Marcellus and Utica shales as well as other unconventional shale oil and gas wells.

The petitioner states that:

(a) The Harrison County Mine produces approximately 25,856 tons of coal each day and 5,735,891 cubic feet of methane is liberated at the mine each day.

(b) There are unconventional wells within the projected mining operations, which the petitioner is applying to plug.

(c) The petitioner is applying to plug wells in the Marcellus, Utica shales, and all other unconventional shale oil and gas wells within the mine's projected operations.

The petitioner proposes the following alternative method:

(a) District Manager Approval:

(1) The petition applies to unconventional wells including the Marcellus and Utica shales and other unconventional shale oil and gas wells. These unconventional wells include wells that have been depleted of oil or gas production, wells that have not produced oil/gas and may have been plugged, or active wells not producing oil/gas. Potential oil and gas producing formations that have not produced in commercial quantities (e.g., exploratory wells, wildcat wells, and dry holes), are also included in this petition.

(2) A 300 foot safety barrier will be built and maintained around the oil and gas wells, until the MSHA District Manager has approved mining in that area. The petitioner defines oil and gas wells as active, inactive, abandoned, shut-in, previously plugged wells, water injection wells, and carbon dioxide sequestration wells.

(3) Before mining inside the safety barrier around any well that the mine will intersect, the petitioner will give the MSHA District Manager a sworn affidavit or declaration by a company official, stating the required procedures for cleaning out, preparing, and plugging each gas or oil well have been completed.

(4) The affidavit or declaration will include the logs described below in (b)(viii), as well as any other records that the District Manager requires. If the well intersection is not planned, the petitioner will request a permit reducing the 300 foot barrier to remove the part not included in the well intersection.

(5) Where the total depth of the well is unknown, the petitioner must contact MSHA to create a communications protocol notifying the District Manager outside normal working hours.

(6) This petition applies to all underground coal mining at the mine.  
(b) The petitioner proposes to use the following procedures when cleaning out and preparing oil and gas wells prior to plugging and replugging;

(1) For cleaning out and preparing vertical oil and gas wells prior to plugging and replugging, the petitioner will test for gas emissions before cleaning out, preparing, plugging, and replugging oil and gas wells. If gas is detected, the MSHA District Manager will be contacted. The following procedures will be conducted:

(i) The petitioner will remove casings and clean the borehole to 200 feet below the coal seam being mined, or the lowest mineable seam (whichever is lower). For wells over 4,000 feet below the seam, the well will be cleaned to 400 feet below the seam, or the lowest mineable seam, whichever is lower.

(ii) If the well is less than 4,000 feet deep, the petitioner will clean out the well from the surface to at least 200 feet below the lowest mineable coal seam base, unless the MSHA District Manager requires cleaning below that based on the geological strata or well pressure data. The petitioner will provide to the District Manager all the information they have on the geology, strata, and pressure of the well. If the well depth is equal to or greater than 4,000 feet, the petitioner will clean out the well from the surface to at least 400 feet below the lowest mineable coal seam base. The petitioner will remove all materials that are within the well, throughout the entire diameter of the well, from wall to wall. If the depth is unknown, and there is no historical data, the District Manager will be contacted before continuing. In active, non-producing wells being prepared according to this petition, the petitioner will (1) attempt to remove all casings using diligent effort; or (2) if the casings cannot be removed, fill with cement from the lowest possible depth to 200 feet below the seam being mined or to the lowest mineable seam, whichever is lower for wells less than 4,000 feet, or 400 feet below the seam mine, whichever is lower, for wells 4,000 feet or more, (3) casings unable to be removed will be perforated 200 feet below the seam to be mined, or lowest minable seam whichever is lower, or 400 feet below the seam to be mined if wells are 4,000 feet or deeper, and the well ring (annuli) will be cemented or filled.

(iii) Casings unable to be removed will be cut, milled, perforated or ripped at a spacing to help remove remaining casing in the seam by mining equipment. Remaining casing will be perforated or ripped to permit the injection of cement into voids within and around the casing. Any remaining casing will be perforated or ripped every 5 feet from 10 feet below the seam to 10 feet above the seam.

(iv) The petitioner will pull at least 150 percent casing string weight or make at least 3 attempts to spear or overshot to grip the casing for the pull effort. A 3,000 foot casing string will be assumed when the casing string length is unknown. Records of these efforts,

including additional measures required by the District Manager, and casing length and weight, will be kept for MSHA to review.

(v) The petitioner will perforate or rip at every 50 feet from at least 200 feet (400 feet if the total well depth is 4,000 feet or deeper) below the base of the coal seam to be mined or the lowest mineable coal seam, whichever is lower, up to 100 feet above the uppermost mineable coal seam that is being mined. The petitioner will ensure that the annulus between the casings and the well walls are filled with expanding cement, with a minimum of 0.5 percent after setting, and contain no voids.

(vi) Jet/sand cutting will be used for ripping or perforating casing with three or more strings of casing in the seam. This uses compressed nitrogen gas and sand to cut well casings. Active wells start 200 feet above the bottom of the coal seam at 200 foot intervals, to 200 feet below the bottom of the seam.

(vii) If unable to remove all casings, the petitioner will contact the District Manager. If unable to clean out casings, the petitioner will prepare the well from the surface to a minimum of 200 feet below the base of the lowest mineable seam for wells less than 4,000 feet deep, and 400 feet below the lowest mineable seam for wells 4,000 feet or deeper (unless the MSHA District Manager requires a greater distance).

(viii) If the petitioner, with a casing bond log, can show to the satisfaction of the District Manager that the annuli in the well are properly sealed with cement, then the petitioner will not perforate or rip casings at that well. Any casings remaining when multiple casing and tubing strings exist in coal horizon(s) will be ripped or perforated and filled with cement. A casing bond log for each casing and tubing string will be required if used instead of perforating multiple strings.

(ix) Down-hole logs will be prepared for each well consisting of caliper

survey logs, a bond log if available, a deviation survey, and a gamma survey suitable for determining the top, bottom, and thickness of all coal seams and potential hydrocarbon producing strata and the location for the bridge plug.

(x) A journal will be kept to describe the depth and nature of materials encountered; the bit size and type used to drill each portion of the hole; the length and type of material for plugging the well; the length of casing removed, perforated or ripped or left in place; any sections where casing was cut or milled; or any other information for cleaning and sealing the well. Invoices, work-orders, and other related records will be maintained and available to MSHA at request.

(xi) If all casing can be removed (or there is no casing), the operator will prepare the well for plugging, and use seals described below. For wells less than 4,000 feet deep to seal to 200 feet below the coal seam to be mined, or the lowest mineable seam (whichever is lower), or for wells that are 4,000 feet or deeper, seal to 400 feet below the coal seam to be mined, or the lowest mineable seam, whichever is lower.

(xii) In the event that the cleaned-out well produces excessive gas, a mechanical bridge plug will be placed in the borehole in a competent stratum at least 200 feet (at least 400 feet if the well is 4,000 feet or deeper) below the base of the lowest mineable coalbed, but above the top of the uppermost hydrocarbon-producing stratum, unless the MSHA District Manager requires a larger distance. The petitioner will give the District Manager any geological information possessed on strata and pressure of the well. If it is not possible to set a mechanical bridge plug, an appropriately sized packer may be used in place of the mechanical bridge plug.

(xiii) If the uppermost hydrocarbon-producing stratum is within 300 feet of the base of the lowest mineable coalbed, a properly placed mechanical bridge plug, described in paragraph (vii) above, will be used to isolate the hydrocarbon-producing stratum from the expanding cement plug. A minimum of 200 feet (400 feet if the well is 4,000 feet or deeper) of



expanding cement will be placed below the lowest mineable coalbed unless the MSHA District Manager requires a greater distance, based on judgement, geological strata, or well pressure.

(c) For plugging or replugging oil and gas wells to the surface:

(1) Once the well has been completely cleaned out, as specified above, the following will be done to plug or replug wells:

(i) A cement plug will be set by pumping an expanding cement slurry down the well from at least 200 feet (400 feet if the well is 4,000 feet or deeper) below the base of the coal seam, or lowest mineable seam, depending on which is lower, or lower if determined by the District Manager. It will be pumped under 200 pounds per square inch of pressure, using Portland cement or another lightweight cement mixture to fill from 100 feet above the top of the uppermost mineable coal seam (or higher, if determined by the District Manager) to the surface.

(ii) Steel turnings or small magnetic particles will be embedded in the top of the cement near the surface as a permanent magnetic monument of the well, or alternatively, a 4.0 inch or larger casing set in cement will be set extended 36 inches above ground level with the API well number engraved or welded on the casing (if not marked physically, high-resolution GPS coordinates will be provided).

(d) Procedures for plugging or replugging oil and gas wells to use as degasification wells:

(1) Once the well has been completely cleaned out, as specified above, the following will be done to plug or replug wells to be used as degasification wells:

(i) A cement plug will be set by pumping an expanding cement slurry down the well from at least 200 feet (400 feet if the well is 4,000 feet or deeper) below the coal seam to be mined, or lowest mineable seam, depending on which is lower, or lower if determined by the District Manager. It will be pumped under 200 pounds per square inch of pressure. The top of the cement will extend at least 50 feet above the top of the seam unless more is required by the District Manager.

(ii) The bedrock of the upper portion of the well will be grouted with a casing to protect it. The rest of the well can be cased or uncased.

(iii) The top of the degasification casing will be fitted with wellhead equipment, as required by the District Manager in the approved ventilation plan, this equipment can include check valves, shut-in valves, sampling ports, flame arrestor equipment, and security fencing.

(iv) Degasification operations will be included in the approved ventilation plan, including methane level tests and limits on methane concentrations.

(v) Once the mine area is degassed by a well and sealed, or the mine is abandoned, the petitioner will plug degasification wells: (1) a tube will be inserted to the bottom of the well (or if not possible, within 100 feet above the seam), blockage will be removed to make sure the tube can be inserted to the required depth; (2) a cement plug will be set into the well using Portland cement or another lightweight cement down the tubing until the well is filled to the surface; (3) steel turnings or small magnetic particles will be embedded in the top of the cement near the surface as a permanent magnetic monument of the well, or alternatively, a 4.0 inch or larger casing set in cement will be set extended 36 inches above ground level with the API well number engraved or welded on the casing; and (4) this does not apply to degasification holes not intersecting the mined seam, do not commercially produce gas, and have no API number.

(e) Alternative procedures for preparing or replugging oil and gas wells.

(1) If it is agreed upon by the District Manager, that a well cannot be cleaned out completely due to damage to the well because of subsidence, caving, or another factor:

(i) A hole will be drilled adjacent and parallel to the well to a depth of at least 200 feet (400 feet if the well is 4,000 feet or deeper) below the lowest mineable coal seam, unless more is required by the District Manager.

(ii) A geophysical sensing device will be used to locate casings remaining

in the well.

(iii) If there are casing(s) present in the well, the petitioner will access the well from a parallel hole and will perforate or rip all casings at intervals of at least 5 feet, from 10 feet below the coal seam to 10 feet above the coal seam. After that, the petitioner will perforate or rip at least every 50 feet from 200 feet (400 feet if the well is 4,000 feet or deeper) below the coal seam to be mined, or below the base of the lowest mineable coal seam, whichever is lower, or up to 100 feet above the seam mined, unless more is required by the District Manager.

(iv) The annulus between casings and the well wall will be filled with expanding cement (at a minimum 0.5 percent expansion upon setting), with no voids. If the petitioner, using a casing bond, can demonstrate that the annulus of the well is adequately sealed with cement, the petitioner will not perforate or rip casing for that well. When there are multiple casings and tubing strings in the coal horizon, remaining casing will be ripped or perforated and filled with expanding cement. A casing bond log for each casing and tubing string will be used instead of ripping or perforating multiple strings.

(v) If the petitioner and MSHA determine that there is not enough casing in the well, a horizontal hydraulic fracturing technique can be used to intercept the original well. The petitioner will fracture at least six places at intervals agreed to by the District Manager. These fractures will be from at least 200 feet (400 feet if the well is 4,000 feet or deeper) below the base of the coal seam to be mined, or the lowest mineable coal seam, whichever is lowest, or to at least 50 feet above the seam mined. Expanding cement will be pumped into the fractured well to intercept voids.

(vi) Down-hole logs will be prepared for each well consisting of caliper survey logs, a bond log if available, a deviation survey, and a gamma survey suitable for determining the top, bottom, and thickness of all coal seams and potential hydrocarbon producing strata and the location for the bridge plug.

(vii) A journal will be kept describing the depth and nature of materials encountered; the bit size and type used to drill each portion of the hole; the length and type of material for plugging the well; the length of casing removed, perforated or ripped or left in place, any sections where casing was cut or milled; or any other information for cleaning and sealing the well. Invoices, work-orders, and other related records will be maintained and available to MSHA at request.

(viii) After plugging the wells as described above, the petitioner will plug the adjacent hole, from the bottom to the surface, using Portland cement or another lightweight cement.

(ix) Steel turnings or small magnetic particles will be embedded in the top of the cement near the surface as a permanent magnetic monument of the well, or alternatively, a 4.0 inch or larger casing set in cement will be set extended 36 inches above ground level

(x) The petitioner and District Manager will discuss each hole, a combination of methods outlined in (d)(1)(iii) and (d)(1)(iv) will be used on a single well, depending on conditions. The petitioner will use a registered petroleum engineer to provide additional documents and certificates to support alternative methods if requested by the District Manager.

(2) The petitioner will use the following procedures for mining within a 100-foot diameter barrier around a well:

(i) Before intersecting any plugged or replugged wells, a conference before intersecting any plugged or replugged well may be requested by any of the following: the petitioner (or its representative), a representative of miners, a State agency, or the MSHA District Manager. The requester will let the other parties know of the conference with a reasonable amount of time before the conference, allowing for an opportunity to participate. The focus of the conference is to review, evaluate, and accommodate any abnormal or unusual circumstances that relate to the condition of the well or surrounding strata.

(ii) The intersection of a well by the petitioner will be conducted on a shift approved by the MSHA District Manager. The petitioner will notify the MSHA District Manager and the miners' representative prior to the intersection so that representatives can be present.

(iii) For continuous mining, drilage sites will be installed by the petitioner at the last open crosscut near the area to be mined to ensure intersection of the well. The drilage sites will not be more than 50 feet from the well. For longwall-mining, distance markers will be installed on 5-foot centers 50 feet ahead of the well in the headgate and tailgate entry.

(iv) Firefighting equipment, including fire extinguishers, rock dust, and sufficient fire hose to reach the working face area of the mining-through will be available when either the conventional or continuous mining method is used. The fire hose will be located in the last open crosscut of the entry or room. The petitioner will maintain the water line to be able to reach the farthest point of penetration on the section. A hose to the longwall water supply is sufficient if longwall mining.

(v) Sufficient supplies of roof support and ventilation materials will be available and located at the last open crosscut. In addition, an emergency plug and/or plugs will be available in the immediate area of the mine-through.

(vi) Equipment will be checked for permissibility and serviced on the shift prior to mining-through the well. Water sprays, water pressures and water flow rates will be checked and any issues will be corrected.

(vii) The methane monitor on the longwall, continuous mining machine, or cutting machine and loading machine will be calibrated on the shift prior to mining-through the well.

(viii) When mining is in progress, tests for methane will be made with a hand-held methane detector at least every 10 minutes from the time that mining with the continuous mining machine or longwall face is within 30 feet of the well until the well is

intersected and immediately prior to well intersection. During the actual cutting through process, no individual will be allowed on the return side until mining-through has been completed and the area has been examined and declared safe. Workplace examinations on the return side of the shearer will be done while the machine is idle. The approved ventilation plan will be followed at all times unless otherwise determine by the District Manager due to a need for more air velocity for intersection.

(ix) When using continuous or conventional mining methods, the working place will be free from accumulations of coal dust and coal spillages, and rock dust will be placed on the roof, rib and floor within 20 feet of the face when intersecting near the well on the shift or shifts during which it will occur. For longwall sections, rock dusting will be done on roof, rib, and floor up to the headgate and tailgate gob.

(x) When the wellbore is intersected, all equipment will be de-energized and the area thoroughly examined and determined safe before mining is resumed.

(xi) After a well has been intersected and the working place determined safe, mining will continue inby the well at a sufficient distance to permit adequate ventilation around the area of the wellbore.

(xii) When a torch is necessary for poorly cut or milled casings, no open flames will be permitted in the area until adequate ventilation has been established around the wellbore and methane levels of less than 1 percent are present in all areas affected by flames or sparks from the torch. Before using a torch, a thick layer of rock dust will be applied to any roof, face, floor, ribs or exposed coal within 20 feet of the casing.

(xiii) Non-sparking (brass) tools will be used only to expose and examine cased wells. These tools will be located on the working section.

(xiv) No person will be permitted in the area of the mining-through operation except for those actually engaged in the operation, company personnel, representatives of the miners, personnel from MSHA, and personnel from the appropriate State agency.

(xv) The petitioner will alert all personnel in the mine of a planned intersection of the well before going underground if it is to occur during the shift. The warning will be continuously repeated until the well is mined through.

(xvi) The mining-through operation will be under the direct supervision of a certified official. Instructions concerning the mining-through operation will be issued only by the certified official in charge.

(xvii) If the petitioner cannot find the well in the longwall panel or if the intersection is missed, the petitioner will cease mining and examine the area for hazardous conditions at the projected well location, notify the District Manager, and make a reasonable attempt to locate the well using visual observation and inspection of the survey data. Mining may resume if the well is located and hazardous conditions do not exist. The petitioner will work with the District Manager to resolve issues before mining is resumed.

(xviii) If the well is not plugged to the total depth of the minable coal seams identified with the core hole logs, coal seams below the lowest plug will remain subject to 30 CFR 75.1700 barrier requirements if developed in the future.

(xix) The petitioner will follow all safety precautions required by MSHA and State regulatory agencies having jurisdiction over the plugging site to provide protection to miners.

(xx) Miners involved in plugging/replugging will be trained on the operations of this petition before starting the process. The petition will be posted at well sites until plugging/replugging is complete.

(xxi) When using mechanical bridge plugs, the petitioner should use the best technology required or recognized by the State or oil/gas industries.

(xxii) The petitioner will notify the District Manager as set forth in the cut through procedures for each well.

(xxiii) Within 30 days after the Proposed Decision and Order (PDO) becomes

final, the petitioner will submit proposed revisions to be approved by the MSHA District Manager, as part of the 30 CFR 48 training plan. This will include initial and refresher training. The revisions are to include training on the above terms for all miners involved in well intersection prior to mining within 150 feet of the well which is to be mined through.

(xxiv) The required person under 30 CFR 75.1501 Emergency Evacuations is responsible for emergencies relating to the intersection and this person will review intersection procedures before the intersection occurs.

(xxv) Within 30 days of when this PDO is finalized, the petitioner will submit a revised emergency evacuation and firefighting training program, required by 30 CFR 75.1502. The petitioner will revise the program to incorporate hazards and evacuation plans used for well intersection. All underground miners will be trained in the above plan revisions within 30 days of submittal.

(xxvi) The petitioner asserts that the proposed alternative method will at all times guarantee no less than the same measure of protection from the potential hazards against which the existing standard for 30 CFR 75.1700 is intended to guard.

-----

Docket Number: M-2020-028-C.

Petitioner: Marshall County Coal Resources, Inc., 57 Goshorn Woods Rd., Cameron, WV 26033.

Mine: Marshall County Mine, MSHA I.D. No. 46-01437, located in Marion County, West Virginia.

Regulation Affected: 30 CFR 75.1700 (Oil and gas wells).

Modification Request: The petitioner requests a modification of the existing standard, 30 CFR 75.1700, as it relates to vertical oil and gas wells at the Marshall County Mine. The operator is petitioning in order to plug and mine through wells in the Marcellus and Utica shales as well as other unconventional shale oil and gas wells.



The petitioner states that:

(a) The Harrison County Mine produces approximately 50,000 tons of coal each day and 11,659,131 cubic feet of methane is liberated at the mine each day.

(b) There are nine Marcellus wells and six Utica Shale wells within the mining projections, which the petitioner is applying to plug. The operator does not own the gas wells on the property and other wells may be drilled in the future.

(c) The petitioner is applying to plug vertical to horizontal oil and gas shale wells within the mine's projected operations so that they can be mined through.

The petitioner proposes the following alternative method:

(a) District Manager Approval:

(1) The petition applies to unconventional wells including the Marcellus and Utica shales and other unconventional shale oil and gas wells. These unconventional wells include wells that have been depleted of oil or gas production, wells that have not produced oil/gas and may have been plugged, or active wells not producing oil/gas. Potential oil and gas producing formations that have not produced in commercial quantities (e.g., exploratory wells, wildcat wells, and dry holes), are also included in this petition.

(2) A 300 foot safety barrier will be built and maintained around the oil and gas wells, until the MSHA District Manager has approved mining in that area. The petitioner defines oil and gas wells as active, inactive, abandoned, shut-in, previously plugged wells, water injection wells, and carbon dioxide sequestration wells.

(3) Before mining inside the safety barrier around any well that the mine will intersect, the petitioner will give the MSHA District Manager a sworn affidavit or declaration by a company official, stating the required procedures for cleaning out, preparing, and plugging each gas or oil well have been completed.

(4) The affidavit or declaration will include the logs described below

in (b)(viii), as well as any other records that the District Manager requires. If the well intersection is not planned, the petitioner will request a permit reducing the 300 foot barrier to remove the part not included in the well intersection.

(5) Where the total depth of the well is unknown, the petitioner must contact MSHA to create a communications protocol notifying the District Manager outside normal working hours.

(6) This petition applies to all underground coal mining at the mine.

(b) The petitioner proposes to use the following procedures when cleaning out and preparing oil and gas wells prior to plugging and replugging;

(1) For cleaning out and preparing vertical oil and gas wells prior to plugging and replugging, the petitioner will test for gas emissions before cleaning out, preparing, plugging, and replugging oil and gas wells. If gas is detected, the MSHA District Manager will be contacted. The following procedures will be conducted:

(i) The petitioner will remove casings and clean the borehole to 200 feet below the coal seam being mined, or the lowest mineable seam (whichever is lower). For wells over 4,000 feet below the seam, the well will be cleaned to 400 feet below the seam, or the lowest mineable seam, whichever is lower.

(ii) If the well is less than 4,000 feet deep, the petitioner will clean out the well from the surface to at least 200 feet below the lowest mineable coal seam base, unless the MSHA District Manager requires cleaning below that based on the geological strata or well pressure data. The petitioner will provide to the District Manager all the information they have on the geology, strata, and pressure of the well. If the well depth is equal to or greater than 4,000 feet, the petitioner will clean out the well from the surface to at least 400 feet below the lowest mineable coal seam base. The petitioner will remove all materials that are within the well, throughout the entire diameter of the well, from wall to wall. If the depth is unknown, and there is no historical data, the District Manager will be contacted before continuing. In active,

non-producing wells being prepared according to this petition, the petitioner will (1) attempt to remove all casings using diligent effort; or (2) if the casings cannot be removed, fill with cement from the lowest possible depth to 200 feet below the seam being mined or to the lowest mineable seam, whichever is lower for wells less than 4,000 feet, or 400 feet below the seam mine, whichever is lower, for wells 4,000 feet or more, (3) casings unable to be removed will be perforated 200 feet below the seam to be mined, or lowest minable seam whichever is lower, or 400 feet below the seam to be mined if wells are 4,000 feet or deeper, and the well ring (annuli) will be cemented or filled.

(iii) Casings unable to be removed will be cut, milled, perforated or ripped at a spacing to help remove remaining casing in the seam by mining equipment. Remaining casing will be perforated or ripped to permit the injection of cement into voids within and around the casing. Any remaining casing will be perforated or ripped every 5 feet from 10 feet below the seam to 10 feet above the seam.

(iv) The petitioner will pull at least 150 percent casing string weight or make at least 3 attempts to spear or overshot to grip the casing for the pull effort. A 3,000 foot casing string will be assumed when the casing string length is unknown. Records of these efforts, including additional measures required by the District Manager, and casing length and weight, will be kept for MSHA to review.

(v) The petitioner will perforate or rip at every 50 feet from at least 200 feet (400 feet if the total well depth is 4,000 feet or deeper) below the base of the coal seam to be mined or the lowest mineable coal seam, whichever is lower, up to 100 feet above the uppermost mineable coal seam that is being mined. The petitioner will ensure that the annulus between the casings and the well walls are filled with expanding cement, with a minimum of 0.5 percent after setting, and contain no voids.

(vi) Jet/sand cutting will be used for ripping or perforating casing with

three or more strings of casing in the seam. This uses compressed nitrogen gas and sand to cut well casings. Active wells start 200 feet above the bottom of the coal seam at 200 foot intervals, to 200 feet below the bottom of the seam.

(vii) If unable to remove all casings, the petitioner will contact the District Manager. If unable to clean out casings, the petitioner will prepare the well from the surface to a minimum of 200 feet below the base of the lowest mineable seam for wells less than 4,000 feet deep, and 400 feet below the lowest mineable seam for wells 4,000 feet or deeper (unless the MSHA District Manager requires a greater distance).

(viii) If the petitioner, with a casing bond log, can show to the satisfaction of the District Manager that the annuli in the well are properly sealed with cement, then the petitioner will not perforate or rip casings at that well. Any casings remaining when multiple casing and tubing strings exist in coal horizon(s) will be ripped or perforated and filled with cement. A casing bond log for each casing and tubing string will be required if used instead of perforating multiple strings.

(ix) Down-hole logs will be prepared for each well consisting of caliper survey logs, a bond log if available, a deviation survey, and a gamma survey suitable for determining the top, bottom, and thickness of all coal seams and potential hydrocarbon producing strata and the location for the bridge plug.

(x) A journal will be kept to describe the depth and nature of materials encountered; the bit size and type used to drill each portion of the hole; the length and type of material for plugging the well; the length of casing removed, perforated or ripped or left in place; any sections where casing was cut or milled; or any other information for cleaning and sealing the well. Invoices, work-orders, and other related records will be maintained and available to MSHA at request.

(xi) If all casing can be removed (or there is no casing), the operator will

prepare the well for plugging, and use seals described below. For wells less than 4,000 feet deep to seal to 200 feet below the coal seam to be mined, or the lowest mineable seam (whichever is lower), or for wells that are 4,000 feet or deeper, seal to 400 feet below the coal seam to be mined, or the lowest mineable seam, whichever is lower.

(xii) In the event that the cleaned-out well produces excessive gas, a mechanical bridge plug will be placed in the borehole in a competent stratum at least 200 feet (at least 400 feet if the well is 4,000 feet or deeper) below the base of the lowest mineable coalbed, but above the top of the uppermost hydrocarbon-producing stratum, unless the MSHA District Manager requires a larger distance. The petitioner will give the District Manager any geological information possessed on strata and pressure of the well. If it is not possible to set a mechanical bridge plug, an appropriately sized packer may be used in place of the mechanical bridge plug.

(xiii) If the uppermost hydrocarbon-producing stratum is within 300 feet of the base of the lowest mineable coalbed, a properly placed mechanical bridge plug, described in paragraph (vii) above, will be used to isolate the hydrocarbon-producing stratum from the expanding cement plug. A minimum of 200 feet (400 feet if the well is 4,000 feet or deeper) of expanding cement will be placed below the lowest mineable coalbed unless the MSHA District Manager requires a greater distance, based on judgement, geological strata, or well pressure.

(c) For plugging or replugging oil and gas wells to the surface:

(1) Once the well has been completely cleaned out, as specified above, the following will be done to plug or replug wells:

(i) A cement plug will be set by pumping an expanding cement slurry down the well from at least 200 feet (400 feet if the well is 4,000 feet or deeper) below the base of the coal seam, or lowest mineable seam, depending on which is lower, or lower if determined by the District Manager. It will be pumped under 200 pounds per square inch of pressure, using Portland cement or another lightweight cement mixture to fill from 100 feet above the top of the uppermost mineable coal seam (or higher, if determined by the District Manager) to the surface.

(ii) Steel turnings or small magnetic particles will be embedded in the top of the cement near the surface as a permanent magnetic monument of the well, or alternatively, a 4.0 inch or larger casing set in cement will be set extended 36 inches above ground level with the API well number engraved or welded on the casing (if not marked physically, high-resolution GPS coordinates will be provided).

(d) Procedures for plugging or replugging oil and gas wells to use as degasification wells:

(1) Once the well has been completely cleaned out, as specified above, the following will be done to plug or replug wells to be used as degasification wells:

(i) A cement plug will be set by pumping an expanding cement slurry down the well from at least 200 feet (400 feet if the well is 4,000 feet or deeper) below the coal seam to be mined, or lowest mineable seam, depending on which is lower, or lower if determined by the District Manager. It will be pumped under 200 pounds per square inch of pressure. The top of the cement will extend at least 50 feet above the top of the seam unless more is required by the District Manager.

(ii) The bedrock of the upper portion of the well will be grouted with a casing to protect it. The rest of the well can be cased or uncased.

(iii) The top of the degasification casing will be fitted with wellhead equipment, as required by the District Manager in the approved ventilation plan, this equipment can include check valves, shut-in valves, sampling ports, flame arrestor equipment, and security fencing.

(iv) Degasification operations will be included in the approved ventilation plan, including methane level tests and limits on methane concentrations.

(v) Once the mine area is degassed by a well and sealed, or the mine is abandoned, the petitioner will plug degasification wells: (1) a tube will be inserted to the bottom of the well (or if not possible, within 100 feet above the seam), blockage will be removed to

make sure the tube can be inserted to the required depth; (2) a cement plug will be set into the well using Portland cement or another lightweight cement down the tubing until the well is filled to the surface; (3) steel turnings or small magnetic particles will be embedded in the top of the cement near the surface as a permanent magnetic monument of the well, or alternatively, a 4.0 inch or larger casing set in cement will be set extended 36 inches above ground level with the API well number engraved or welded on the casing; and (4) this does not apply to degasification holes not intersecting the mined seam, do not commercially produce gas, and have no API number.

(e) Alternative procedures for preparing or replugging oil and gas wells.

(1) If it is agreed upon by the District Manager, that a well cannot be cleaned out completely due to damage to the well because of subsidence, caving, or another factor:

(i) A hole will be drilled adjacent and parallel to the well to a depth of at least 200 feet (400 feet if the well is 4,000 feet or deeper) below the lowest mineable coal seam, unless more is required by the District Manager.

(ii) A geophysical sensing device will be used to locate casings remaining in the well.

(iii) If there are casing(s) present in the well, the petitioner will access the well from a parallel hole and will perforate or rip all casings at intervals of at least 5 feet, from 10 feet below the coal seam to 10 feet above the coal seam. After that, the petitioner will perforate or rip at least every 50 feet from 200 feet (400 feet if the well is 4,000 feet or deeper) below the coal seam to be mined, or below the base of the lowest mineable coal seam, whichever is lower, or up to 100 feet above the seam mined, unless more is required by the District Manager.

(iv) The annulus between casings and the well wall will be filled with expanding cement (at a minimum 0.5 percent expansion upon setting), with no voids. If the petitioner, using a casing bond, can demonstrate that the annulus of the well is adequately sealed

with cement, the petitioner will not perforate or rip casing for that well. When there are multiple casings and tubing strings in the coal horizon, remaining casing will be ripped or perforated and filled with expanding cement. A casing bond log for each casing and tubing string will be used instead of ripping or perforating multiple strings.

(v) If the petitioner and MSHA determine that there is not enough casing in the well, a horizontal hydraulic fracturing technique can be used to intercept the original well. The petitioner will fracture at least six places at intervals agreed to by the District Manager. These fractures will be from at least 200 feet (400 feet if the well is 4,000 feet or deeper) below the base of the coal seam to be mined, or the lowest mineable coal seam, whichever is lowest, or to at least 50 feet above the seam mined. Expanding cement will be pumped into the fractured well to intercept voids.

(vi) Down-hole logs will be prepared for each well consisting of caliper survey logs, a bond log if available, a deviation survey, and a gamma survey suitable for determining the top, bottom, and thickness of all coal seams and potential hydrocarbon producing strata and the location for the bridge plug.

(vii) A journal will be kept describing the depth and nature of materials encountered; the bit size and type used to drill each portion of the hole; the length and type of material for plugging the well; the length of casing removed, perforated or ripped or left in place, any sections where casing was cut or milled; or any other information for cleaning and sealing the well. Invoices, work-orders, and other related records will be maintained and available to MSHA at request.

(viii) After plugging the wells as described above, the petitioner will plug the adjacent hole, from the bottom to the surface, using Portland cement or another lightweight cement.

(ix) Steel turnings or small magnetic particles will be embedded in the top



of the cement near the surface as a permanent magnetic monument of the well, or alternatively, a 4.0 inch or larger casing set in cement will be set extended 36 inches above ground level

(x) The petitioner and District Manager will discuss each hole, a combination of methods outlined in (d)(1)(iii) and (d)(1)(iv) will be used on a single well, depending on conditions. The petitioner will use a registered petroleum engineer to provide additional documents and certificates to support alternative methods if requested by the District Manager.

(2) The petitioner will use the following procedures for mining within a 100-foot diameter barrier around a well:

(i) Before intersecting any plugged or replugged wells, a conference before intersecting any plugged or replugged well may be requested by any of the following: the petitioner (or its representative), a representative of miners, a State agency, or the MSHA District Manager. The requester will let the other parties know of the conference with a reasonable amount of time before the conference, allowing for an opportunity to participate. The focus of the conference is to review, evaluate, and accommodate any abnormal or unusual circumstances that relate to the condition of the well or surrounding strata.

(ii) The intersection of a well by the petitioner will be conducted on a shift approved by the MSHA District Manager. The petitioner will notify the MSHA District Manager and the miners' representative prior to the intersection so that representatives can be present.

(iii) For continuous mining, drivage sites will be installed by the petitioner at the last open crosscut near the area to be mined to ensure intersection of the well. The drivage sites will not be more than 50 feet from the well. For longwall-mining, distance markers will be installed on 5-foot centers 50 feet ahead of the well in the headgate and tailgate entry.

(iv) Firefighting equipment, including fire extinguishers, rock dust, and

sufficient fire hose to reach the working face area of the mining-through will be available when either the conventional or continuous mining method is used. The fire hose will be located in the last open crosscut of the entry or room. The petitioner will maintain the water line to be able to reach the farthest point of penetration on the section. A hose to the longwall water supply is sufficient if longwall mining.

(v) Sufficient supplies of roof support and ventilation materials will be available and located at the last open crosscut. In addition, an emergency plug and/or plugs will be available in the immediate area of the mine-through.

(vi) Equipment will be checked for permissibility and serviced on the shift prior to mining-through the well. Water sprays, water pressures and water flow rates will be checked and any issues will be corrected.

(vii) The methane monitor on the longwall, continuous mining machine, or cutting machine and loading machine will be calibrated on the shift prior to mining-through the well.

(viii) When mining is in progress, tests for methane will be made with a hand-held methane detector at least every 10 minutes from the time that mining with the continuous mining machine or longwall face is within 30 feet of the well until the well is intersected and immediately prior to well intersection. During the actual cutting through process, no individual will be allowed on the return side until mining-through has been completed and the area has been examined and declared safe. Workplace examinations on the return side of the shearer will be done while the machine is idle. The approved ventilation plan will be followed at all times unless otherwise determine by the District Manager due to a need for more air velocity for intersection.

(ix) When using continuous or conventional mining methods, the working place will be free from accumulations of coal dust and coal spillages, and rock dust will be placed on the roof, rib and floor within 20 feet of the face when intersecting near the well on the

shift or shifts during which it will occur. For longwall sections, rock dusting will be done on roof, rib, and floor up to the headgate and tailgate gob.

(x) When the wellbore is intersected, all equipment will be de-energized and the area thoroughly examined and determined safe before mining is resumed.

(xi) After a well has been intersected and the working place determined safe, mining will continue inby the well at a sufficient distance to permit adequate ventilation around the area of the wellbore.

(xii) When a torch is necessary for poorly cut or milled casings, no open flames will be permitted in the area until adequate ventilation has been established around the wellbore and methane levels of less than 1 percent are present in all areas affected by flames or sparks from the torch. Before using a torch, a thick layer of rock dust will be applied to any roof, face, floor, ribs or exposed coal within 20 feet of the casing.

(xiii) Non-sparking (brass) tools will be used only to expose and examine cased wells. These tools will be located on the working section.

(xiv) No person will be permitted in the area of the mining-through operation except for those actually engaged in the operation, company personnel, representatives of the miners, personnel from MSHA, and personnel from the appropriate State agency.

(xv) The petitioner will alert all personnel in the mine of a planned intersection of the well before going underground if it is to occur during the shift. The warning will be continuously repeated until the well is mined through.

(xvi) The mining-through operation will be under the direct supervision of a certified official. Instructions concerning the mining-through operation will be issued only by the certified official in charge.

(xvii) If the petitioner cannot find the well in the longwall panel or if the intersection is missed, the petitioner will cease mining and examine the area for hazardous conditions at the projected well location, notify the District Manager, and make a reasonable

attempt to locate the well using visual observation and inspection of the survey data. Mining may resume if the well is located and hazardous conditions do not exist. The petitioner will work with the District Manager to resolve issues before mining is resumed.

(xviii) If the well is not plugged to the total depth of the minable coal seams identified with the core hole logs, coal seams below the lowest plug will remain subject to 30 CFR 75.1700 barrier requirements if developed in the future.

(xix) The petitioner will follow all safety precautions required by MSHA and State regulatory agencies having jurisdiction over the plugging site to provide protection to miners.

(xx) Miners involved in plugging/replugging will be trained on the operations of this petition before starting the process. The petition will be posted at well sites until plugging/replugging is complete.

(xxi) When using mechanical bridge plugs, the petitioner should use the best technology required or recognized by the State or oil/gas industries.

(xxii) The petitioner will notify the District Manager as set forth in the cut through procedures for each well.

(xxiii) Within 30 days after the Proposed Decision and Order (PDO) becomes final, the petitioner will submit proposed revisions to be approved by the MSHA District Manager, as part of the 30 CFR 48 training plan. This will include initial and refresher training. The revisions are to include training on the above terms for all miners involved in well intersection prior to mining within 150 feet of the well which is to be mined through.

(xxiv) The required person under 30 CFR 75.1501 Emergency Evacuations is responsible for emergencies relating to the intersection and this person will review intersection procedures before the intersection occurs.

(xxv) Within 30 days of when this PDO is finalized, the petitioner will

submit a revised emergency evacuation and firefighting training program, required by 30 CFR 75.1502. The petitioner will revise the program to incorporate hazards and evacuation plans used for well intersection. All underground miners will be trained in the above plan revisions within 30 days of submittal.

(xxvi) The petitioner asserts that the proposed alternative method will at all times guarantee no less than the same measure of protection from the potential hazards against which the existing standard for 30 CFR 75.1700 is intended to guard.

**Roslyn Fontaine,**

*Deputy Director,*

*Office of Standards, Regulations, and Variances.*

[FR Doc. 2020-25103 Filed: 11/12/2020 8:45 am; Publication Date: 11/13/2020]